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# Home Theater Systems

o w n e r s   m a n u a l

# WELCOME TO THE ENERGY HOME THEATER EXPERIENCE.

Congratulations on your selection of the **Energy® Home Theater** system. You are about to experience the pure pleasure of listening, in its finest form. When the **Energy Home Theater** System are combined with quality electronic components, they will reproduce superb high fidelity stereo music and help re-create all the action and excitement of film soundtracks on video.

We are pleased with your decision to welcome **Energy Home Theater** speakers into your listening environment and look forward to many years together as we continue to develop fine audio products for your entertainment pleasure.

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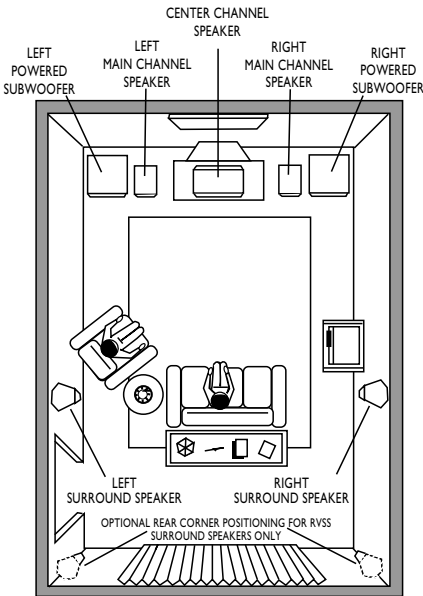
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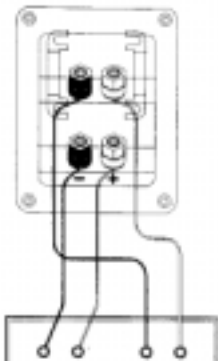
## A COMPLETE ENERGY® HOME THEATER SYSTEM CONSISTS OF:

- A) Two left and right channel main speakers – magnetically shielded for trouble-free use on either side of the television screen or video monitor.
- B) One shielded center channel speaker – should be located above or below the television or video screen to ensure the central audio image, including the actor's voices, emanate from the screen.
- C) Two surround channel effects speakers – should be positioned behind or on either side of the primary listening area, to provide accurate re-creation of effects, and ambience involving the audience in the action.
- D) One or two ES Series powered subwoofers – may be located anywhere in your room to radiate deep bass information throughout the listening area.

## Connecting your Home Theater System Speakers:

The following instructions and diagram will assist you in connecting the individual speakers to your amplifier or receiver:

First turn your amplifier or receiver off to avoid damage which may result from accidental shorting of the speaker leads. Correct phase polarity is critical for proper stereo imaging and bass performance. The red (+) terminal on your amplifier or receiver must be connected to the red (+) terminal on your speaker. The same applies for the black (–) terminal. Connect one loudspeaker at a time to ensure proper connection of left,



center, right, rear right, and rear left channels. Make sure all wires are firmly fastened. If you notice a great lack of bass and/or central image focus, double check your connections for proper polarity.

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**NOTE:** If you are completing your Home Theater system with an **Energy ES Series** powered subwoofer, consult the ES Series owner's manual for hook-up instructions.

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## Positioning of your Home Theater Speakers:

Your **Energy** Home Theater speakers are designed to provide a large listening window allowing versatility of room placement. The Center Channel speaker and Left, Right Main speakers and the left and right surround speakers are sonically matched. This ensures that the sound image coincides with the images on the screen. We suggest that you follow the guidelines outlined below for each **Home Theater** speaker to achieve the best performance possible.

### Center Channel Speaker:

A center channel speaker's purpose is to ensure that the central audio image, including the actors voices, emanate from the TV screen. For best results the center channel speaker should be located immediately above or below the TV or video screen.

Four protective, self-adhesive rubber feet are enclosed. These should be applied to the bottom of the center channel cabinet to add stability on bookshelves or television cabinets and as added protection for your furnishings.

### Left and Right Channel Main Speakers:

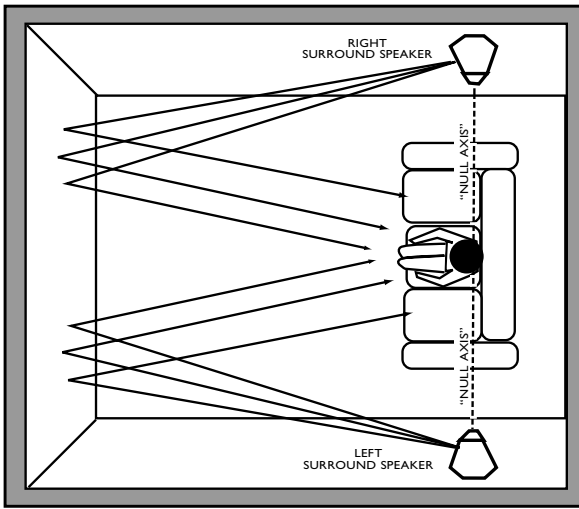
Your **Home Theater** speakers should be placed on either side of your TV or video monitor. Since these speakers are magnetically shielded, they may be placed in close proximity to your television without affecting picture quality. For best stereo separation, we recommend a distance of 5 feet or more between your Left and Right Main speakers.

It is essential to place your Left and Right Main speakers on rigid speaker stands or other surfaces such as bookshelves so the tweeter is approximately at the listener's ear level when seated. (SST-21 21" high metal stands are ideal for this purpose.)

### Energy Surround Effects Speakers:

A pair of **Energy** surround effects speakers mounted on (or near) the side walls adjacent to the listener (or behind the listener) will provide the sense of spaciousness and ambience recorded in the film soundtrack. Engineered to deliver sound power into the listening room that is identical to the front speakers, these effects speakers ensure a smooth and seamless panning of special effects from the front to rear monitors.

Best surround sound effects are derived from dipole speakers that provide a "null" (dead spot) in the radiation pattern aimed at the main listener(s) position. This pattern presents an enveloping surround sound field, with no specific directional cues.



### RVSS AND LISTENER SHOWING NULL & DIPOLE RADIATION PATTERN

**Energy** Effects speakers are designed with the necessary dipole radiation pattern in the critical mid to high frequency range (400Hz - 20 kHz). In addition they also feature unusually deep bass response not found in conventional dipole speaker designs, adding further impact and realism to the film's special effects.

**NOTE:** The unique shape of the RVSS cabinet allows versatility in placement, in either side wall or rear corner locations.

### ES Series Powered Subwoofers (Optional):

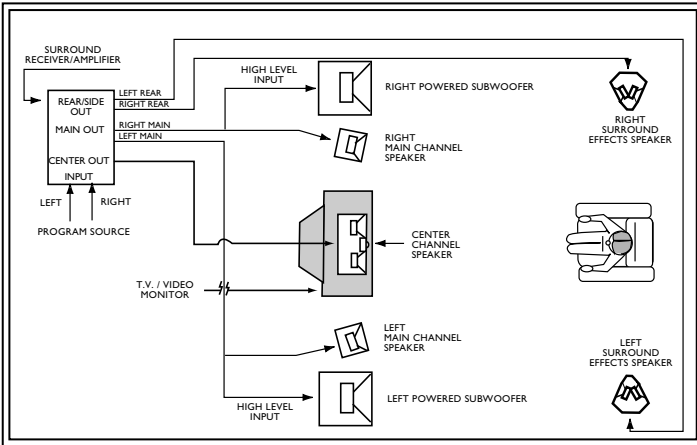
Low frequencies are essentially non-directional, so your subwoofer may be placed anywhere in the listening room without significantly affecting the stereo image of your main speakers. However, low frequency response and output level are somewhat effected by placement in the room, and you should experiment with positioning to obtain the best performance. For example, placement too near the corner of the room may result in "boomy" bass performance. Having the subwoofer further from the corner will normally result in more detailed and accurate performance.

If you are using a pair of ES-series Subwoofers in stereo, it is preferable to place each subwoofer adjacent to the main front speaker of the same channel.

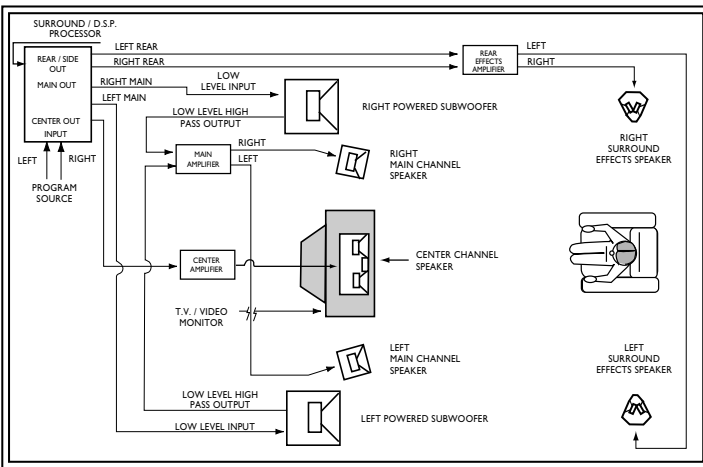
### Selection of Connecting Wire:

We recommend the use of heavy gauge, high quality speaker wire to obtain optimum performance from your Home Theater system speakers. Speaker wire that consists of high quality silver or copper will normally provide best results. Your **Energy** dealer can recommend the wire type that is best suited for these speakers.

### Typical High Level Hook-up to a Surround Receiver and a Powered Subwoofer



### Typical Home Theater Room Layout Using Surround D.S.P. Processor and Separate Amplifiers



### Cabinet Care:

Black high gloss finished models should be polished periodically to preserve the lustre. A soft, dirt-free cloth and high quality furniture polish should be used for this purpose.

Wood grain, and satin (white or black) finished models should be gently wiped clean from time to time with a damp cloth to remove any dust or stains. To remove dust from the grille cloth, use the brush attachment on your vacuum cleaner or a slightly dampened sponge.

# RVSS WALL MOUNTING PROCEDURES

THESE INSTRUCTIONS HAVE BEEN EXPRESSLY DEVELOPED FOR THE SAFE AND SECURE MOUNTING OF THE ENERGY RVSS SURROUND SOUND SPEAKER WITH THE DOUBLE KEY-WAY MOUNTING BRACKET SUPPLIED.

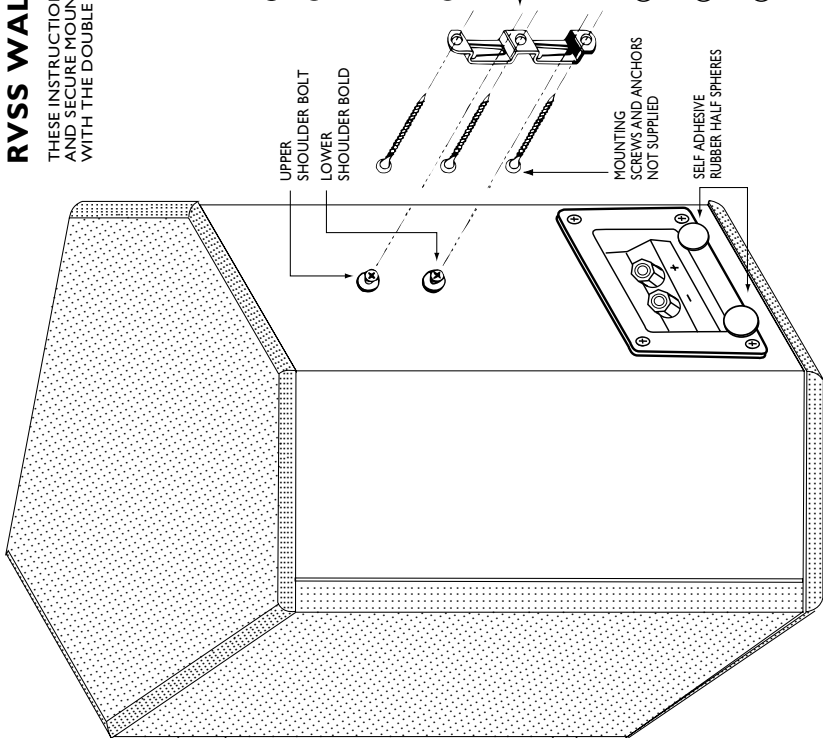
The RVSS mounting bracket should be installed following recognized construction standards and practices. Contact Energy Loudspeakers or obtain professional assistance if you have any questions about the proper mounting method.

- 1 Select the desired location on the wall where the RVSS speaker is to be mounted. See page 2 of this owner's manual for optimum placement recommendations.
  - 2 Using the double key-way bracket as a template, mark the three screw hole locations on the wall.
  - 3 Be sure you have selected the appropriate mounting hardware (toggle screws, anchors, etc.) for the type of wall material involved. If possible, mount the double key-way bracket directly into a wall stud. Next affix the bracket to the wall surface using the appropriate hardware you have selected.
- IMPORTANT: BE SURE TO MOUNT THE BRACKET WITH THE LARGE KEY-WAY OPENINGS AT THE TOP.**

- 4 Lay the RVSS speaker on its front face, and use a Phillips screwdriver to fasten the upper and lower shoulder bolts into the two threaded metal inserts (see figure 1).

**DOUBLE "KEYWAY" BRACKET  
PLEASE NOTE ORIENTATION!**

- 5 Place two self-adhesive rubber half spheres in the lower edge of the terminal assembly (see figure 1). These will provide stability for the speaker and protect the surface of the wall.
- 6 Connect the speaker wires to the red (positive) and black (negative) binding posts as described in "Connecting your RVS Home Theater Speakers," section of your owners manual.
- 7 Lift the speaker into mounting position, aligning the shoulder-bolts on the RVSS with the tip openings of the brackets' double key-ways. Then allow the speaker to slide down into the locked position in the key-ways. Double check to make certain both shoulder-bolts are engaged in the key-ways.

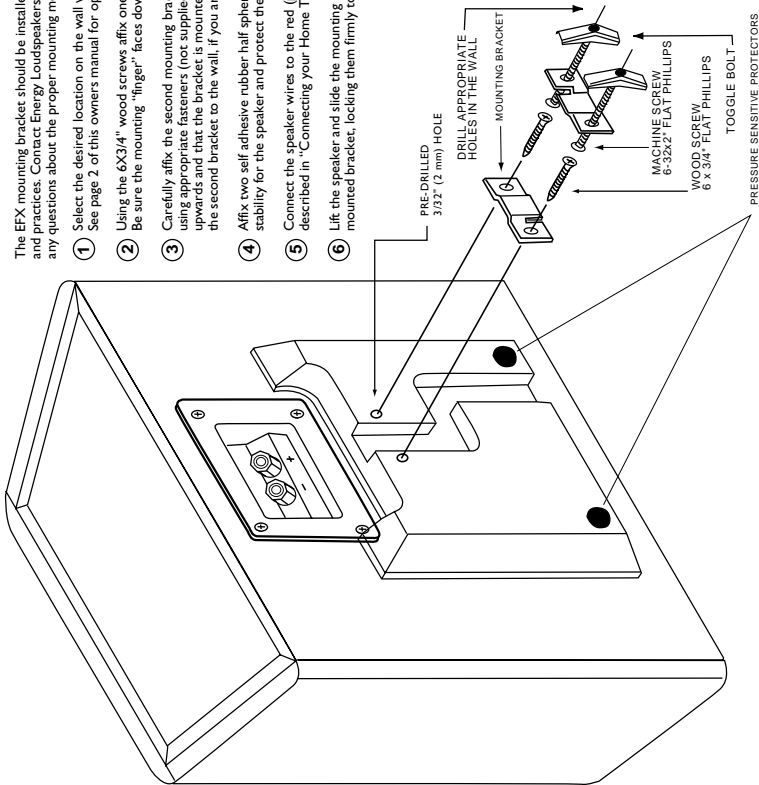


# EFX WALL MOUNTING PROCEDURES

THESE INSTRUCTIONS HAVE BEEN EXPRESSLY DEVELOPED FOR THE SAFE AND SECURE MOUNTING OF THE ENERGY EFX SURROUND EFFECTS SPEAKER USING THE MOUNTING BRACKET SUPPLIED.

The EFX mounting bracket should be installed following recognised construction standards and practices. Contact Energy Loudspeakers or obtain professional assistance, if you have any questions about the proper mounting method.

- 1 Select the desired location on the wall where the EFX speaker is to be mounted. See page 2 of this owners manual for optimum placement recommendations.
- 2 Using the 6X3/4" wood screws affix one mounting bracket to the rear of the EFX speaker. Be sure the mounting "finger" faces downwards as shown in the diagram.
- 3 Carefully affix the second mounting bracket to the wall. If possible mount it to a wall stud using appropriate fasteners (not supplied). Ensure that the bracket "finger" is facing upwards and that the bracket is mounted level. Toggle bolts have been supplied to affix the second bracket to the wall, if you are unable to secure it to a wall stud.
- 4 Affix two self adhesive rubber half spheres as shown in the diagram. These will provide stability for the speaker and protect the surface of the wall.
- 5 Connect the speaker wires to the red (positive) and black (negative) binding posts as described in "Connecting your Home Theater-Speakers" section of this manual.
- 6 Lift the speaker and slide the mounting bracket on the rear of the speaker into the wall mounted bracket, locking them firmly together.



Quantity	Part Description
4	Machine screw 6-32x2" flat Phillips
4	Wood screw 6X3/4" flat Phillips
4	Pressure sensitive protectors
4	Mounting bracket
4	Toggle bolt



## SPECIFICATIONS

	<b>AC-300 L/C/R</b>	<b>EC-200 L/C/R</b>	<b>EC-100 L/C/R</b>
<b>SYSTEM TYPE:</b>	Dual-vent (QB3) alignment D'Apolito driver configuration	Dual front vented (QB3) alignment D'Apolito driver configuration	Dual front vented (QB3) alignment D'Apolito driver configuration
<b>TWEETER:</b>	Magnetically shielded, ferro-fluid cooled 1" (2.5cm) Aluminum Dome	Magnetically shielded ferro-fluid cooled 1" (2.5cm)	Magnetically shielded ferro-fluid cooled 3/4" (1.9cm), multi-laminate soft dome
<b>BASS/MID DRIVERS:</b>	2 x 5-1/2" (14 cm), magnetically shielded, with I.M. polypropylene cones, cast Spherex™ Baskets, and rubber surrounds	2 x 5-1/2" (14 cm), magnetically shielded design, with injection molded polypropylene cone and rubber surround	2 x 4-1/2" (11.4 cm), magnetically shielded design with polypropylene cone
<b>FREQUENCY RESPONSE: ON AXIS: +/- 3dB</b>	40 Hz - 22 KHz	45 Hz - 22 kHz	60 Hz - 20 KHz
<b>SENSITIVITY: (anechoic)</b>	90 dB @ 1M/2.83V	90 dB @ 2.83V/1M	89 dB @ 2.83V/1M
<b>CROSSOVER POINTS:</b>	1.8 KHz	2.2 KHz	2.5 KHz
<b>IMPEDANCE:</b>	6 ohms (nominal) 4 ohms (minimum)	8 ohms (nominal)	12 ohms (nominal) 8 ohms (minimum)
<b>RECOMMENDED AMP POWER:</b>	15 – 175 watts/channel	15 – 150 watts/channel	15 – 100 watts/channel
<b>MAXIMUM POWER HANDLING:</b>	175 watts (less than 5% clipping)	150 watts (less than 5% clipping)	100 watts (less than 5% clipping)
<b>DIMENSIONS: (in) (cm)</b>	7-1/2 x 19-11/32 x 12-3/4 19 x 49.1 x 32.4	6-3/4 x 21-1/2 x 11-3/8 16.9 x 54.5 x 28.9	6 x 18-3/4 x 9-1/8 15.2 x 47.6 x 22.0
<b>WEIGHT:</b>	23 lbs. (10.46 kg)	23 lbs. (10.46 kg)	14 lbs. (6.36 kg)
<b>FINISH:</b>	Black High Gloss end caps	Matte Black	Matte Black
<b>GRILLE COLOUR:</b>	Black, wraparound acoustically transparent grille cloth	Black	Black

DESCRIPTIONS AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

## SPECIFICATIONS

	<b>RVSS</b>	<b>EFX</b>
<b>SYSTEM TYPE:</b>	Dual-vent, dipolar Radiation pattern (400 Hz - 20 kHz)	Acoustic Suspension Dipolar Radiation (400 Hz - 20 kHz)
<b>TWEETER:</b>	Ferro-fluid cooled 2 x 3/4" (19 mm), soft dome	Ferro-fluid cooled, 2 x 2-1/4" (57 mm), cone Mid/High frequency transducer
<b>BASS/MID DRIVERS</b>	2 x 5.5" (140 mm) with injection molded polypropylene cone and foam surround	2 x 5.5" (140 mm) with injection molded polypropylene cone
<b>USABLE BASS RESPONSE:</b>	55 KHz	80 KHz
<b>TOTAL RADIATED SOUND RESPONSE</b>	65 Hz - 18 KHz +/- 3dB	90 Hz - 12 KHz +/- 3dB
<b>SENSITIVITY:</b>	86 dB @ 1M/2.83 V input	87 dB @ 1 M/2.83 V input
<b>CROSSOVER POINTS:</b>	2.5 KHz	400 KHz
<b>IMPEDANCE:</b>	6 ohms (nominal) 4 ohms (minimum)	8 ohms
<b>RECOMMENDED AMP POWER:</b>	15 watts - 125 watts RMS/channel	15 watts - 100 watts RMS/channel
<b>MAXIMUM POWERHANDLING:</b>	125 watts RMS (less than 5% clipping)	100 watts RMS (less than 5% clipping)
<b>DIMENSIONS:</b> (in) (cm)	10.25 x 10 x 8.25 26 x 25.4 x 21	10 x 10.5 x 5.5 25.4 x 26.7 x 13.97
<b>WEIGHT (each):</b>	15 lbs. (7 kg)	10 lbs. (4.55 kg)
<b>FINISH:</b>	Black or White	Matte Black or White
<b>GRILLE COLOUR:</b>	Black or white acoustically transparent cloth	Black or white acoustically transparent cloth

DESCRIPTIONS AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

## LIMITED WARRANTY POLICY

### WARRANTY PROTECTION:

**Energy** warrants this product to the retail purchaser against any failure resulting from original manufacturing defects in workmanship or materials. The warranty is in effect for a period of (5) years from date of purchase from an authorized **Energy** dealer and is valid only if the original dated bill of sale is presented when service is required.

The warranty does not cover damage caused during shipment, by accident, misuse, abuse, neglect, unauthorized product modification, failure to follow the instructions outlined in the owner's manual, failure to perform routine maintenance, damage resulting from unauthorized repairs or claims based upon misrepresentations of the warranty by the seller.

### Warranty Service:

If you require service for your **Energy** loudspeaker(s) at any time during the (5) five year warranty period, please contact: 1) the dealer from whom you purchased the product(s), 2) **Energy** National Service, 203 Eggert Road, Buffalo, N.Y. 14215

Tel: 716-896-9801 or 3) **Energy** Loudspeakers, a division of Audio Products International Corp., 3641 McNicoll Avenue, Scarborough, Ontario, Canada, M1X 1G5, Tel: 416-321-1800. You will be responsible for transporting the speakers in adequate packaging to protect them from damage in transit and for the shipping costs to an authorized **Energy** service center or to **Energy** Loudspeakers. If the product is returned for repair to **Energy** Loudspeakers in Scarborough or Buffalo, the costs of the return shipment to you will be paid by **Energy**, provided the repairs concerned fall within the Limited Warranty.

**Energy** Warranty is limited to repair or replacement of **Energy** products. It does not cover any incidental or consequential damage of any kind. If the provisions in any advertisement, packing cartons or literature differ from those specified in this warranty, the terms of the Limited Warranty prevail.

### Warranty Outside of The United States and Canada:

Product warranties may be legislated differently from one country to another. Ask your local **Energy** dealer for details of the LIMITED WARRANTY applicable in your country.

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**IMPORTANT:** Please retain the carton and packing material for this **Energy** product to protect it in the event it ever has to be shipped to a service center for repair. Product received damaged by a service center that has been shipped by the end user in other than the original packaging, will be repaired, refurbished and properly packaged for return shipment at the end user's expense.

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## WARNING

### IMPORTANT TECHNICAL NOTE PLEASE READ BEFORE OPERATING SPEAKERS

THE WARRANTY ON SPEAKERS IS VOID IF THE VOICE COILS ARE BURNED OR DAMAGED AS RESULT OF OVERPOWERING OR CLIPPING.

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**OVERPOWERING:** The volume control of most amplifiers and receivers is a logarithmic type, which means that full power may be reached with the volume control at as little as the halfway point. In addition, operating the loudness feature or boosting the treble or bass controls increases power output well beyond rated levels.

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AS A RESULT OF THE ABOVE FACTORS, A 30 WATT AMPLIFIER CAN PRODUCE OUTPUT LEVELS OF OVER 100 WATTS AND MAY DAMAGE YOUR LOUDSPEAKER.

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**CLIPPING:** Clipping refers to the power level at which an amplifier begins to distort a waveform by flattening its top and bottom into a square wave-shape. When fed to tweeters and/or midrange speakers, this may result in exceeding their maximum power handling capacity, causing damage to the speaker voice coil.

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CLIPPING CAN BE IDENTIFIED BY A FUZZY OR DISTORTED SOUND. IF THIS IS HEARD, LOWER THE VOLUME IMMEDIATELY TO AVOID DAMAGE TO YOUR SYSTEM. CONTINUOUS CLIPPING WILL DAMAGE OR BURN OUT THE SPEAKERS.